

REDISCOVERY OF GONOCARPUS TRICHOSTACHYUS (HALORAGACEAE)

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Abstract. The rediscovery of a little-known species of *Gonocarpus* is reported, and the taxon is redescribed in the light of this new, more complete material.

In a recent revision of *Gonocarpus* (Orchard 1975: 234-235), one of several taxa that could not be adequately dealt with because of lack of material was the Western Australian species *Gonocarpus trichostachyus* (Benth.) Orchard. The only collections known were the type, collected by Drummond about 1848, without locality, and another collected by Cronin in 1890 from "near Lake Wagin" (now the town of Wagin). Both of these collections were of poor quality, with only a few fruits and no complete flowers.

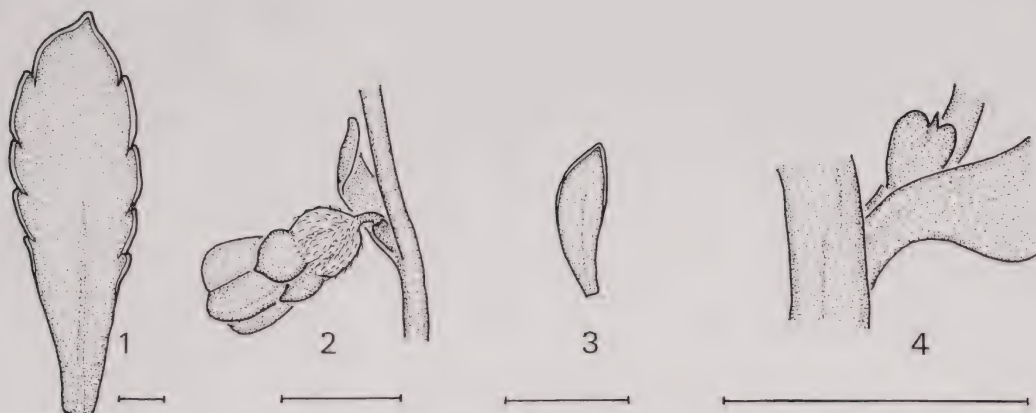
A further collection (*R. D. Royce 9305*, 24. x. 1970, low perennial in sandy soil along Vermin Fence near N. boundary Fitzgerald River National Park, AK, PERTH) has recently been made, consisting of good, although slightly immature, flowering material. On the basis of this new collection the species is redescribed in detail below.

Erect annual or perennial herb to 17 cm tall; stems olive-green to red-brown, not ribbed, older stems glabrous, younger stems with sparse to moderately dense, appressed, white unicellular (occasionally 2-celled) hairs 0.1-0.2 mm long.

Leaves decussate, sessile, oblanceolate, 0.7-1.0 cm long, 1.5-3.0 mm wide, midrib faint, other veins obscure; margins thickened, hyaline, crenulate; lamina glabrous or sparsely appressed pilose, mainly on the margins and midrib of the lower surface, with hairs as for stems (Fig. 1).

Inflorescence an indeterminate spike of flowers borne singly in the axils of alternate primary bracts. Lateral inflorescences arise in axils of reduced upper leaves, and are themselves often branched. Ultimate branches of inflorescence reddish, filiform, tips nodding. Primary bracts reddish, lanceolate to oblanceolate, 1.0-1.3 mm long, 0.3-0.4 mm wide, entire, \pm glabrous. Secondary bracts red-purple to brown, ovate to obcordate, with short mucro in notch at apex, 0.3-0.4 mm long, 0.2-0.3 mm wide, glabrous (Figs. 2-4).

Flowers 4-merous on pedicels 0.4-0.5 mm long, pendulous. Sepals 4, reddish-green, ovate to orbicular, 0.4-0.5 mm long, 0.4-0.5 mm wide, very weakly midribbed, glabrous. Petals 4, deep reddish-purple, hooded with incurved tip, keeled, non-unguiculate, 0.9-1.1 mm long, 0.3 mm wide, \pm glabrous or very sparsely appressed pilose on keel. Stamens 8; anthers yellow to reddish, linear-oblong, 0.6-0.9 mm long, 0.2 mm wide, 4-locular, non-apiculate. Styles 4, clavate; stigmas red, capitate. Ovary black, turbinate, 0.6 mm long, 0.7 mm wide, with 8 very weak longitudinal ribs, \pm



Figs. 1-4. *Gonocarpus trichostachyus*. 1. Leaf. 2. Portion of inflorescence showing a flower in the axil of a primary bract. 3. Primary bract. 4. Detail of axil of primary bract, showing secondary bract at base of pedicel. All figures from Royce 9305. Scales represent 1 mm.

densely appressed pilose particularly on ribs, incompletely 4-locular with 1 pendulous ovule per locule.

Fruits on pedicels 0.2-0.5 mm long, dark grey to black, ovoid to turbinate, 0.8-0.9 mm long, 0.6-0.7 mm wide, not or scarcely ribbed, scabrous; sepals persistent, erect, reddish, ovate, 0.6 mm long, 0.6 mm wide, obtuse, enclosing styles; pericarp membranous, 1 seed.

The dimensions given above for the parts of the flower are based largely on buds before anthesis. It is likely that they will have to be increased slightly when fully developed flowers are available. This should remove the large (for *Gonocarpus*) discrepancy between the dimensions given for the ovary and the fruit.

This new collection provides the opportunity for some general comments to be made regarding the distribution and probable relationships of *G. trichostachyus*. In general appearance, habit and colouration, this plant closely resembles *G. paniculatus*, particularly those forms with slightly flattened leaves. The major points of difference between the two species are in their height (up to 17 cm in *G. trichostachyus*; 40-60 cm in *G. paniculatus*), and in their leaf shape (oblanceolate in *G. trichostachyus*; terete to narrow-linear in *G. paniculatus*). In this last character *G. trichostachyus* more closely resembles *G. rudis*, but differs from the latter in having 1(-2)-celled, appressed white hairs instead of the 5-7-celled spreading reddish hairs of *G. rudis*. Both *G. rudis* and *G. trichostachyus* have been found in very much drier habitats than *G. paniculatus* but have the appearance of being closely related satellites of that more palustrine plant.

There is now a considerable gap in the known distribution of *G. trichostachyus* (from Wagon to Fitzgerald River National Park) and it is to be hoped that further collections can be found to fill it.

REFERENCE

ORCHARD, A. E.

- 1975 Taxonomic revisions in the Family Haloragaceae I. The genera *Haloragis*, *Haloragodendron*, *Glischrocaryon*, *Meziella* and *Gonocarpus*. *Bull. Auckland Inst. Mus.* 10: 1-299.